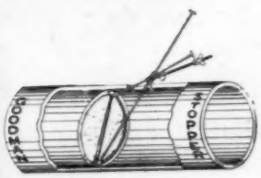
AMERICAN
GAS JOURNAL
Established 1859 Pioneer of the Gas Industry

VOL. 126. No. 7
WHOLE No. 3569

NEW YORK, SATURDAY, AUGUST 14, 1926.

Subscription, $3 Per Year
$4 Canada $5 Foreign

GOODMAN IMPROVED SAFETY GAS MAIN STOPPER



The genuine Goodman Stopper is instantly recognized by the name Goodman which appears on the Improved Patented Locking Sleeve. All genuine Goodman Stoppers are now equipped with this sleeve. Efficient as the Goodman Stopper has always been, the new locking sleeve makes the shut-off still more effective and positive. Stopper cannot slip—gas cannot pass.

All sizes 3 inches to 48 inches in stock. Special sizes on short notice.

Library of Congress
AUG
Smithsonian

SAFETY SERVICE PLUGS

Type "A"
Expansion Plug which fits into the bottom of the service tee and is quickly expanded by turning the wing nut which securely shuts off all gas. Sizes ¾" to 4".

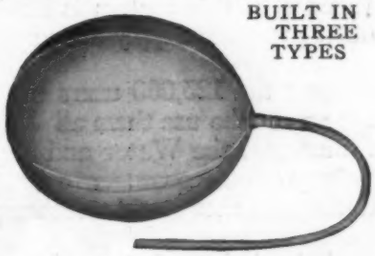
Type "B"
One piece Rubber Plug, taper shaped. can be quickly applied to the bottom of service tee. Fits wedge like and prevents gas escaping. Sizes ¾" to 4".

AIR LINE MASK

With or Without Blower

Dependable Gas Main Bags

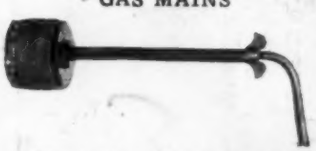
BUILT IN THREE TYPES



Type A—Invisible Seams or Seamless Bag.
Type B—Reinforced Seams—heavier and stronger than Type A.
Type C—Canvas Covered Bags for use in mains coated with tar or oil.
When ordering specify type desired.

All Goods Sent on Approval
BRUSHES
(PIPE CLEANING)
GLOVES-MITTENS
Asbestos
Leather
Rubber
SOAP TAPE
YARN
PACKINGS
ASBESTOS LEAD
JOINT RUNNERS
SOFT WOOD
PLUGS
ALL SIZES

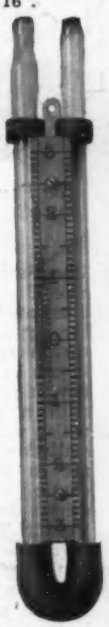
EXPANSION PLUGS FOR GAS MAINS



Fits inside diameter of pipe. Long shank reaches inside past the hub. Can be used in either hub or spigot ends. Standard sizes to 16".

"U" GAUGES

Portable Pressure Gauge for Distribution Men, Complaint Men, or around the Works.



SAFETY GAS MAIN STOPPER CO.

523 ATLANTIC AVENUE **BROOKLYN, N. Y.**

New England Repres.,
The Eastern Serv ice Co., Boston, Mass.

Cable Address: GASTOPPER, N. Y.

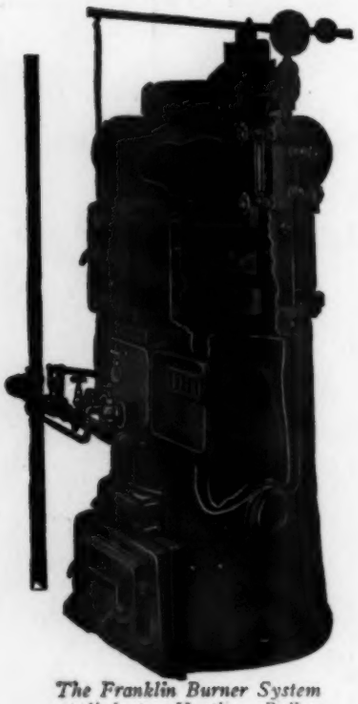
Pacific Coast Repres.,
C. B. Babcock Co., San Francisco, Calif.

Advertising Index, Page 31

Index to Contents, Page 4

It's Never Too Late to Boost FRANKLIN BURNERS

Unlike other types of gas house heating systems which are usually installed during the Summer months, Franklin Quick Removable Gas Burners can be installed at *any time* during the year; because they utilize the warm air furnace, hot water or steam boiler and piping that are already in place.



The Franklin Burner System applied to Heating Boiler.

The Franklin Quick Removable Gas Burner System, as illustrated, is an auxiliary heating appliance for use on coal furnaces and boilers. It can be easily attached in a few minutes' time. Equipped with a swinging stop cock which makes a leak-proof installation when the burners are in use, and a complete shut-off when the burners are swung out of the way. Venturi Tubes are used in the burners. Economy and perfect combustion are possible under any and all conditions without air mixer regulation. Varying gas pressures will not affect the burner, cause it to backfire in the mixer, or go out under low pressure.

Therefore, the installation of Franklin Burners do not consume the time, or inconvenience the purchaser as if a whole new heating system had to be installed.

Franklin Quick Removable Burners are primarily stand-by equipment; to be used between seasons, when chilly mornings and evenings demand some heat but do not warrant the firing-up of the coal furnace; or to supplement the coal furnace, if this system is unable, due to fuel shortage or other cause, to supply adequate heat in zero weather.

Among the 125,000 users of Franklin Burners, however, are some who use them all Winter. In the City of Duluth, Minnesota, the Water and Light Department tell us that "Many of our consumers operate them (Franklin Burners) during the entire cold weather period."

So it is obvious that as Franklin Burners bring so much convenience, comfort and satisfaction to the public at such low cost, that they are easy sellers, if the proper means are used to bring their manifold advantages to the attention of your customers.

Begin *now* and talk up Franklin Quick Removable Burners. Our demonstration set cannot fail to impress and convince prospective purchasers; display it conspicuously and sales will follow.

Write for full details AT ONCE

Franklin Gas Burner Mfg. Co.

Vine and Mitchell Sts. **Cincinnati, Ohio**

MEMBERS THE NATIONAL TRADE EXTENSION BUREAU OF THE PLUMBING AND HEATING INDUSTRY

GLOVER-WEST
Vertical Retorts

1911 FITCHBURG MASS.

1925 AFTER 14 YRS.

Continuous Satisfactory Service

WEST GAS IMPROVEMENT CO.
of America, Inc.
441 Lexington Ave. New York.

American Gas Journal

SIXTY-SEVENTH YEAR

Published Weekly by American Gas Light Journal, Inc., 53 Park Place, New York, N. Y.

S. G. KRAKE, Pres. & Treas. C. S. MYERS, Vice-Pres. A. M. GLEASON, Sec'y.

STANTON G. KRAKE, Managing Editor ISMAR GINSBERG, Editor

"MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS"

Contents of This Issue

Laying a Main Across the Ohio—H. L. Gentry **137**
The Industrial Survey—H. W. Hayward **139**
Selling Water Heater **144**
Situation Fundamentally Sound—L. W. Alwyn-Schmidt **146**
Industrial Accident Prevention—C. J. Rutland **147**
As The Journal Views It **149**
The House Heating Rate
Displays of Industrial Appliances
The Gas Lighter In Window Display—James V. Murray **150**
Ideas for the Man Who Sells—William H. Matlack **151**
Industrial Gas Lesson No. 132 ..... **153**
Progress in Gas Technology **155**
News of the Gas Industry **156**

Subscription $3.00 per year, including postage, in the United States, Mexico, Cuba, Porto Rico, Hawaii or the Philippines; in Canada, $4.00; foreign, $5.00—Single Copies, 10 cents.

AMERICAN GAS JOURNAL, August 14, 1926, Vol. 125, No. 7. Published weekly by American Gas Light Journal, Inc., New York, N. Y. Entered as second-class matter Jan. 9, 1917, at the post-office at New York, N. Y., under the Act of March 3, 1879.

AMERICAN
GAS JOURNAL

Established 1859—Pioneer of the Gas Industry

Vol. 125. No. 7. NEW YORK, AUGUST 14, 1926. Whole No. 3589.

Laying a Main Across the Ohio

How the Louisville Co. "bridged" the river

H. L. Gentry

Superintendent Gas Transportation, Louisville Gas & Electric Company, Louisville, Ky.

REGARDLESS of the number of river crossings one has laid, each time something new and unexpected is liable to happen.

In September 1925, the Louisville Gas & Electric Company had a light line to construct across the Ohio river. At the point selected, the river measured eighteen hundred feet from bank to bank. The banks were fairly steep and from the water line the bed of the river sloped to a depth of twenty-five feet in fifty feet. After it reached this depth the bottom was, as a whole, much the same, although in some places soundings showed a few minor irregularities.

The line was surveyed and marked by buoys in the river. A derrick boat was put into place on the Kentucky side and ditching was begun with a clam shell bucket. For some distance off shore difficulty was encountered as the sand would come in almost as fast as the bucket took it out. However, not much time was lost on this account, and in the morning, two days later, a ditch six feet deep and eight feet wide had been completed under the river.

By this time the barges had been loaded and pipe made up and anchored to the shore. The pipe used was of black steel, screw joint, weighing approximately 49 pounds per foot. The Kentucky shore bend was calculated, fire cradles put on and fired in two places, after which a fairly gentle bend was produced. The pipe was then painted, snubbed off a little and laying commenced.

The Anchorage

The stage of water being normal, it was believed that anchorage, other than derrick boat spuds, would not be necessary but, after laying out ten or twelve joints a down stream wind made it imperative to set out anchors. Four anchors were set out up stream and four down stream at selected points. About twenty feet ahead of each anchor a three-hundred pound weight was lashed to the anchor line. The rope attached to each anchor was fifty feet long, the long end being claw hitched on to the buoy, and the free end running into a bow-line. Four 500 feet anchor ropes were used and operated from the barges and derrick boats. The ropes were rigged so that the rope from the bow of the barge met the rope from the stern approximately sixty feet from the end of the line. This rigging allowed us to use one anchor for upstream tying and one for down stream.

After laying had commenced, it was found necessary to provide some means to buoy the pipe up after the barges were moved ahead. Ordinarily, this is done by additional barges, but on this job the derrick boat boom was used and worked very nicely. A gang of green men were introduced to these duties, and although at first laying was slow, the men learned quickly, and the work went along in good shape. After the first day, the gang was organized as follows:

One pipe stabber, 1 tong boss, 3 jack men, two droppers, 1 back-up man, 16 tong men, 4 collar leak clamp men, 8 deck hands and 2 painters.

The Routine of Joint Making

After a joint has been stabbed and while the tong men were bucking, the deck hands would put on river clamps. But, while the barges were going forward and the deck hands were busy some of the tong men would put on river clamps. This organization kept everyone busy and each man soon learned his duty.

About one-third of the way across the river, and during the night, information was had that a bad down-stream wind was damaging the barges and endangering the pipe. Upon reaching the barges, such was the case. The down-stream wind was making the river very rough and the sterns of the

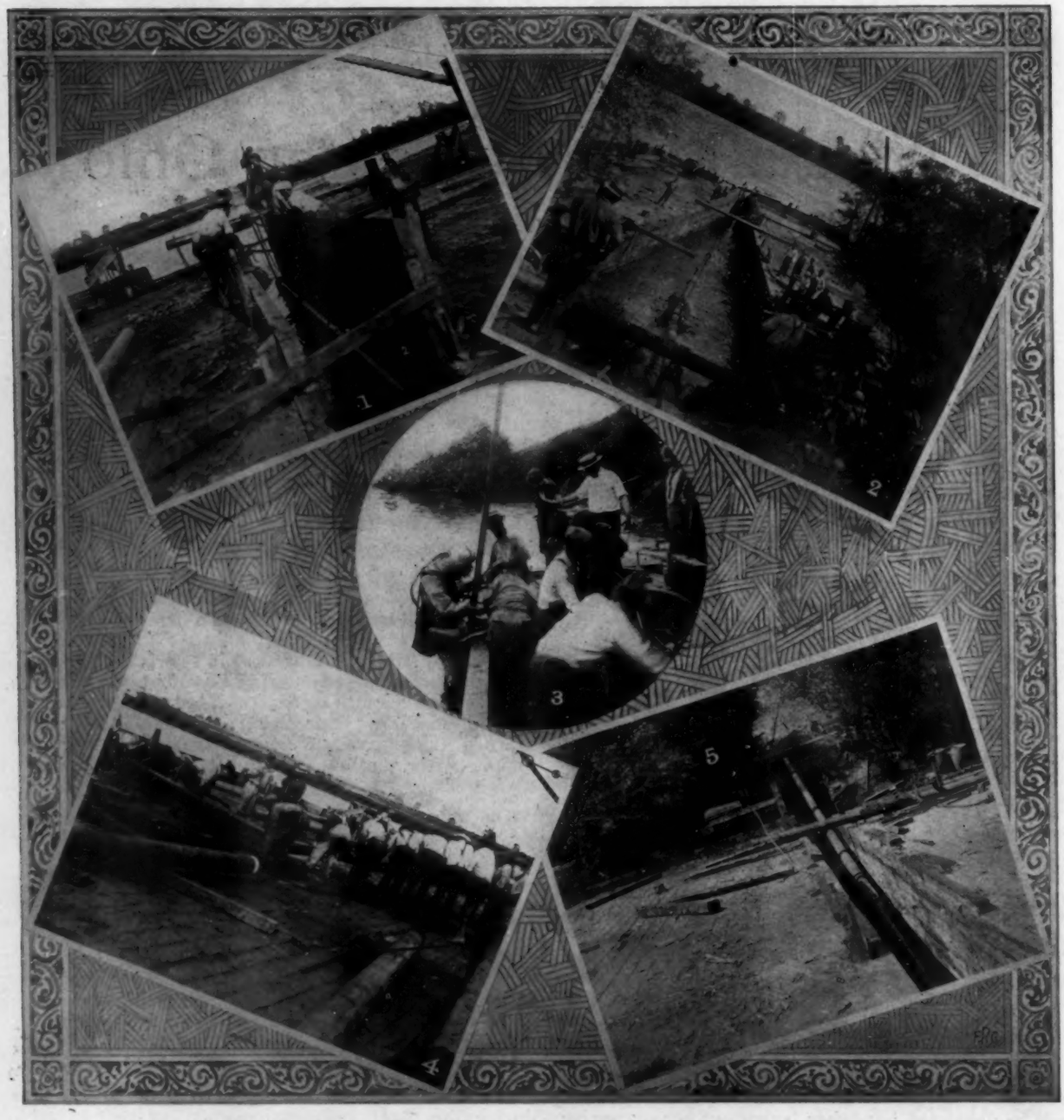
barges were continually bumping the pipe with such force that steps were immediately taken to bullhead the end of the line and lower same below the bottom of the barges.

Before the actual lowering took place, however, the wind commenced to decrease in velocity and by tightening on anchor lines the bumping from waves was greatly reduced.

The following day laying continued. This day the river was very choppy, but laying was only held up for a few hours while derrick boat was maneuvering.

Half Way Across At End Of Second Day

By the end of the second day we had laid one-half way across, and the following morning, as the wind was again down the stream and weather indications for the next day were bad, the men were informed



No. 1. View Showing Boom of Derrick Boat holding weight of pipe off stern of Barges
No. 2. Making Shore Bend Indiana Side
No. 3. Inspecting Kentucky shore Bend and Repairing small collar leak
No. 4. Moving Skids and Barges ahead
No. 5. Ready for Shore Bend

that an attempt would be made to reach Indiana shore before night. Two additional foremen were provided, and with everyone in a determined frame of mind, the work sped up considerably. By noon twenty-two joints had been laid and by seven o'clock that evening an additional twenty-four were laid. The barges were made fast to the shore and men paid time and one-half. The sprint was a godsend, as the next day the weather was worse in so far as the wind was concerned, and had we been off shore the pipe would have had to have been lowered.

The Indiana shore bend was completed and, after bull-heading each end a 250 pound air test developed two small leaks and three fairly large ones.

Diving Work

A diving suit was obtained and the leaks were inspected and repaired. The line was also repaired, and I think the most interesting part of the job was at this time. Anyone building a river crossing is more or less in the dark in so far as what sort of grade the line is laying in after completion. On this job several joints were inspected at various places under the river and in most instances the lines was in very good condition, but, in one or two places the clam had dug deeper and in one place the line was walked under without locating it until the air line and the life line hit the pipe line. In a place such as this, ordinarily, the ditch would be backfilled, but in the Ohio each rise of the river deposits silt and in a few months the entire ditch will be filled.

The Paint

An interesting occurrence in repairing the leaks was the experience with the paint used. This paint was a greasy substance and was advertised as "non-hardening" and effective in places where abrasion was severe. The first leak repaired was in twenty-five feet of water and it was necessary to take off collar leak clamps and replace a split rubber. An attempt was made to wash off the paint with sand but being unable to do so, the work was done with paint all over everything In a few minutes, hands, hammer wrench and other tools were greasy and work was difficult. After an hour of this sort of work the clamp was put back together. In attempting to wrench up, it was found impossible to tighten sufficiently with an ordinary dress wrench, due to the slippery grease. Finally it was necessary to go above and obtain a piece of pipe to put on the end of the wrench so as to obtain leverage.

After the leaks were repaired a one-half inch syphon was put into lines from the Indiana shore. This line was made up and pushed into the 8" for three-hundred feet. It was then brought through the top of the 8" on the shore end by welding, and, since has operated efficiently to remove water in the crossing.

The Industrial Gas Survey *

Its purpose, procedure and benefits

H. W. Hayward

Director of the Research Institute, Combustion Utili ties Corporation, New York, N. Y.

THE time has arrived when the gas companies must place their industrial departments on a sound businesslike basis, and have them so entrenched that they may successfully repulse and rout the great competitive fuel onslaught that seems to gain momentum each day.

They must lay plans for expansion as does any business of competitive nature, and become as aggressive as their competitors.

It is, or has been at least, a sad fact that the average gas company refused to become interested in potentialities, but chose to await the time when these had become actualities before any considerable interest was taken in them. As we all realize—and our competitors are evidently making capital of the fact—"the time for selling is at the time the decision is being made." And it is an important thing to know approximately when the decision is to be made, and so to prepare our campaign that the prospects will at a certain time be in a receptive mood. This is the method used by the leaders in the competitive field, and is the one which must be adopted in our industrial departments if we do not wish to be crowded out of a field that is rightfully ours.

Reasons for Fuel Selection

Let us look briefly into the reasons why any certain fuel is selected by a manufacturer. Among the reasons we would find:

* Read before the 1926 Annual Convention of the Canadian Gas Association.

1. Effect on product.
2. Cost.
3. Availability of supply.
4. Convenience.
5. Service.

All of these will be based on the manufacter's general opinion of each type of fuel, gained from both his experience with the different types and knowledge imparted to him by the champions of these respective fuels. So perhaps this choice may be summed up as only a matter of education. And the time has arrived when we should appoint ourselves as educators.

If we are champions of a certain fuel which we know to be the ideal, it is our duty to the manufacturer to teach him this fact. It is our duty to show him that the effect on the product and the cost of using may be regulated with proper equipment and methods, regardless of past experience with this or other types of fuel; to assure him of the availability of supply and service accompanying this supply; to point out to him advantages and conveniences of our ideal fuel which perhaps he has not had an opportunity to study.

But to become educators we must first become educated, and we must also locate our "students" and classify them as to the type of education needed. This should be the starting point.

Must Locate Our "Students"

So this paper will be dedicated to this starting point which I believe to be the first step necessary to place the industrial gas situation on a competitive business basis, and to elevate it out of the class of the lightning bug who, as someone so aptly stated, has a torch on the rear—he can see where he has been, but not where he is going.

We must make use of a high power headlight which will illuminate our future path and the power must be supplied by budgeted potentialities generated by an intelligent, comprehensive survey of our respective territories. This is exactly what the electric industry has done. They have surveyed every industry and know the potential possibilities in the way of K.W. consumption, maximum revenue to be derived, amount of capital necessary to build plants to carry the load, etc. They have attained their starting point, and have an important fundamental upon which to build.

Many gas company executives believe that within certain limits they know the prospects within their respective territories and rest secure in the belief that in time a certain amount of the business will be theirs. They probably base their figures on a casual survey made by one or more of their men calling at the different plants, asking questions, or perhaps having a questionnaire filled out by one of the engineers or executives in the different plants. Many gas companies do not have even this.

But even so, is a casual survey sufficient?

Casual Survey Insufficient

I do not think so. It is only an approximation at best of the potential fuel possibilities. It will not show you how much of this business can be obtained immediately, and how much can be obtained with changing conditions. When and how can any part or the whole be obtained and what is necessary to secure the business? The casual survey cannot show this. We must go more deeply than a "census" to have a proper basis upon which to work.

The correct survey on the other hand will be one which, when completed, will be a maximum use in the four phases of a gas company's activities, i.e., executive, manufacturing, distribution and—most important of all—"sales."

It must give such information to the management that they will have a complete picture of their industrial possibilities which in turn will show whether there is a justification for their going after this type of load. If there is a justification, it must give a basis upon which they can intelligently budget men and equipment to obtain that load.

It must give such information to the manufacturing department, that intelligent expansion of generating plants may be planned.

Information Given All Departments

It must give such information to the distribution department that intelligent layout of distribution lines may be based on future requirements of prospective customers.

It must give such information to the sales department that they can readily determine what business can be secured under present conditions and what changes in conditions are necessary to obtain the remainder. It should embody all necessary engineering and leave the sales department free to execute their own particular function of gas sales. The engineering and economic phases should be so covered that sales resistance will be reduced to a minimum.

In short, the correct industrial survey must be one which when completed can be used to advantage in all departments of the gas company whose separate functions may in turn be co-ordinated to secure and retain an industrial load at the lowest possible overall cost per 1,000 cu. ft. of gas sold.

This will involve much detail work to secure information that is vital for proper analysis and planning.

The following steps have been found to be most practical and conducive to arriving at the ultimate objective of a complete and useful survey in the shortest length of time.

Make a Preliminary Survey

In order that a systematized plan may be developed it will be necessary to have a general knowledge—based on facts—of the potentialities of a given territory. Of course, in a majority of cases some information is available on the larger industries in a city. But to obtain the desired picture we should have general knowledge of every possible user of gas.

Therefore, for a proper starting point, a complete list should be made up of all possible fuel users. This list is usually made up from the classified sections of telephone or city directories, from the local Chamber of Commerce, list of business houses, or similar sources.

After this list is completed some competent person should make a call on every concern listed. He should state briefly the purpose of his visit and request permission to list a few essential facts concerning the fuels and type of equipment being used. With proper thought all unnecessary questioning can be eliminated so that essential data can be obtained quickly and without annoyance to the customer.

Nature of Information

Briefly, the information obtained should include the following:

1. Name and address of concern and person interviewed.
2. Type of industry represented and product manufactured.
3. Number of days' operation per year and period of day during which each operation is performed.
4. Approximate quantity of fuel used.
5. Fuel costs.
6. A list of all equipment using heat in any form together with a few important facts on each.

Usually this information can be obtained in conversation with someone in authority and by a brief inspection of the plant and heating equipment.

This, then, brings us to the second step, i.e.:

Analysis of Preliminary Survey

Upon the completion of this preliminary survey there will be at hand a complete record of all fuel users within the territory and enough information to classify them into several groups:

(1) Major industrial potentials.
(2) Secondary industrial potentials.
(3) Bakeries.
(4) Hotels and restaurants.
(5) Non-users of heat whose business indicates a prospect before the preliminary call.

From this grouping and knowledge of gas requirements of the different classes of industry, it will be possible to make a rough estimate of the total volume of gas required to replace the present fuels.

Simple Merchandising Proposition

In the majority of cases the third and fourth and sometimes the second group resolve themselves into a simple merchandising proposition. From the preliminary information available on these groups it can be determined just how much of this business can be obtained at present rates, what gas fired equipment or appliances would be desirable and this enables the salesman to make plans to annex that available load as quickly as possible.

The survey will, by the time the preliminary is completed, began to shape itself into a helpful adjunct to the sales department and will begin to funtion to increase the load as it progresses. On the above groups it places at the disposal of the salesman leads and information which will enable him to plan intelligently his approach and sales arguments. This, of course, is one of the most important assets of all selling activity.

In a great many cases those industries which might be classed as secondary industrial prospects will be in part, at least, a straight merchandising proposition due to their probable requirements of standard furnaces or appliances for the use of gas. There may be certain operations or departments of this group which may best be treated as those complete industries classified as major potentials.

Detail Surveys

The third step will be the handling of the larger industries classified from the preliminary survey as the "major group." This major group includes all industries with a multiplicity of heating operations and offers the best opportunity for the sale of large quantities of gas.

This class, for a proper presentation of a proposal, must be studied in detail. Concrete facts must be shown so that reliable cost figures may be obtained and presented. This will, after securing the permission of the management, involve going into the plant under consideration, and making detailed tests of each heating operation in the factory. Actual fuel consumptions will be taken together with a record of the type of work being done, production rate, and any special peculiarities of each operation. Cost of the present fuel and the cost of using this fuel should be determined.

Outside Aid Warranted

After data are obtained on the complete plant, the importance of the group warrants that a con-

Banquet of the Illinois Gas Association held at Champaign, Ill. Reading from left to right around the speakers table, beginning at the extreme end of the table, seated are: Mr. R. V. Prather, Secretary-Treasurer of the Illinois Gas Association, Dr. T. E. Layng, Conductor of the Short Course at the University of Illinois, Mr. B. J. Mullaney, Vice-President of the People's Gas Light and Coke Company; Dean Milo S. Ketchum, College of Engineering; Mr. W. A. Baehr, President, The Illinois Power and Light Corporation; Mr. W. S. Vivian, Director of Public Relations, Middlewest Utilities; Dr. S. W. Parr, Dept. of Chemistry, University of Illinois; Mr. E. D. Bell, Manager of the Champaign Division, Illinos Power and Light Corporation; Mr. M. L. Harry, Manager, The Decatur Division, The Illinois Power and Light Corporation; Mr. W. A. Bertke, President, The Illinois Gas Association and Mr. H. O. Loebell, President, The Surface Combustion Company.

sulting engineer and representative of a reliable equipment manufacturer be called in to assist in properly analyzing the data and making up a complete report to be submitted to the industry covered. The importance of this is that gas equipment recommendations and gas consumption figures on any particular operation should be made in the light of past experience and full advantage should be taken of the possibility of any recent equipment development that would give increased efficiency. The broader field covered by a consulting engineer and equipment manufacturer places them in a better position to have this knowledge than a local industrial fuel engineer.

After an analysis is completed it should consist of all test data on each operation togther with all cost figures covering each item that enters into the heating operation, such as furnace life, pot life, labor, value of rejections, value of lost production, fuel cost, cost of using fuel and any other items which might enter, directly or indirectly through the heating process, into the ultimate cost of the finished product.

These cost figures should be summarized per day, month and year for each heating operation.

Recommendation of Equipment

Following this should be correct recommendation for gas burning equipment to accomplish the same type and amount of work, together with the cost of that equipment.

Next should be given gas consumptions required for the production rate in effect at the time of survey together with the maximum hourly gas demand of that equipment.

Cost figures, in addition to the gas cost, should then be given and compared to those shown for present operation, credit, of course, being given the gas operation for any saving in labor, furnace life, pot lift, etc., which experience has shown can be expected with the type of gas fired equipment recommended.

We therefore have on each operation direct comparative overall cost figures of present fuel with gas per unit of finished product, the former based on actual test figures secured in the manufacturers' plant and the latter based on results obtained on similar operations.

These figures should then be summarized by departments and all departments summarized so as to give total figures for the entire plant.

The Summary Sheet

This summary sheet would then show the overall monthly and yearly cost figures with present fuel and with gas, the total present fuel used per year and month, the total quantity of gas required to accomplish the same amount of work, the maximum hourly gas demand for the entire plant, and the cost of equipment to use gas. Thus the whole story is completed and summarized within itself. A general discussion should be included concerning the application and advantages of gas to the operations covered, and a detailed discussion of the results obtained.

All of this should then be incorporated in report form, one copy of which should be presented to the industry concerned, one copy turned over to the sales department and one copy retained for the gas company files.

These reports will show certain operations or departments in which gas cannot compete under present conditions or present rate set up. These, of course, will not be considered immediately by the sales department, but will prove useful to the gas company executives in a rearrangement of rates.

Every larger user of fuel that the preliminary survey indicates as justifying a more detailed study for proper presentation of a proposal should be covered in the above manner.

Compilation of Complete Gas Company Report

After all preliminary and detailed analyses have been made, a complete gas company report should be compiled from these covering every potential industrial customer within the territory. This should include the complete list from which the preliminary was made, the calculated load of every potential, the rate at which gas must sell per 1,000 cu. ft. to compete with present cost, the maximum hourly demand of each, and the approximate time or day or year at which each load occurs.

This report will then be a complete picture of the industrial possibilities in all of its phases.

The preliminary sheet obtained on the original calls, the detailed report made on the larger potentials, and the completed gas company report may then be used to the advantage and benefit of the different gas company departments and of the whole organization as follows:

1. It will give an insight into the potential as well as available load in the territory served. That is, it will show the amount of business that may be secured under existing conditions, and that possible under conditions where economics of fuel and manufacture change. In the latter case, it will indicate what conditions must change and thus provide a basis for budgeting plant capacity.
2. It will provide a basis upon which intelligently to plan an industrial gas campaign to obtain the potential business.

Classification of Industries

The industries covered, as shown by the survey, will from a sales viewpoint fall into the following classes:

(a) Those considering an immediate change of fuel or equipment, together with small appliance and standard equipment prospects. These, of course, should be approached immediately. Enough data are available from the survey to frame a suitable sales talk and to outline a definite plan of attack. Conclusions may be drawn from data available as to why a change in fuel is anticipated, and points stressed favorable to gaseous fuel which will overcome the unfavorable ones of the present fuel.

(b) Those offering the greatest inducements in

total available load. Under this classification will fall large plants where the economies of the situation indicate a conversion of present fuel to gas, but where, due to large investment in present equipment or perhaps because of some personality concerned, a sale could not very likely be made before an extensive educational program is directed for their benefit. Also those plants whose potential capacity is of such magnitude that complete conversion will be somewhat protracted. This group will represent the most desirable business in point of quantity, but business that will come slowly and be dependent upon the success of each detailed undertaking.

However the sales department is enabled to map out a very definite program eventually to obtain all of this business available under existing rates and to start on the program at this time.

Industries With Greatest Immediate Business

(c) Those industries having the greatest amount of immediate business, that is, having the greatest available load obtainable under conditions of fuel and costs at the present time. Under this group will fall a great many small plants, a few of the larger, and the bakeries where, by the adoption of a refined fuel such as gas to special equipment, a great increase in production and improvement in the quality of the product will result.

(d) Those plants which the analysis of the survey shows as having a load obtainable only by a change in existing conditions. These should be filed, and an eye kept on those dependent conditions, as they may at some time become a part of the "c" group.

(e) Those plants which might be considered "costly customers," such as those having an excessive demand during some short period of the day, so as seriously to handicap the generating capacity of the gas plant, or those plants which are not within a reasonable distance from the present mains and whose potential load would not justify a main extension.

So from this line-up an intelligent and systematic sales campain can be outlined and conducted in a manner that will be most effective.

Improving Load Curve

3. The third major benefit to be derived from the analysis of the survey is that by applying it properly an excellent opportunity is provided to improve the present load curve.

Each valley of a gas company's load curve represents a direct loss to that company, not only in profit from the sales of a cubic foot or gas, but in the cost of idleness of a certain percentage of the total generating capacity. Therefore each valley eliminated or decreased means that much less cost burden every cubic foot of gas in the holder must bear.

Therefore by plotting individual load curves from the data obtained on the different plants we may find those plants which offer greatest opportunity for improving the present load curve. Therefore from certain fixed charges we may determine just what each load is worth and if necessary make certain concessions to obtain those which are most beneficial from this point of view.

Rate Analysis and Design

4. The fourth major benefit derived from the analysis of the survey is in its use for an intelligent rate analysis and as a basis for redesign. The average gas company has a rate which no doubt will hold present customers but is not conducive to obtaining new business, especially of an industrial nature.

The two elements in rate analysis and design are:
(a) What the service costs the gas company.
(b) What the service is worth to the consumer.

We cannot sell gas for less than it costs us, and we cannot sell it for more than it is worth to the consumer.

These are two limits which are fixed and the rate designed to get business will fall somewhere between the two.

From our analysis we may readily determine what the service is worth to each potential consumer. If the present rate will allow us to gain the majority of the potential business shown, we have sufficient reason to believe that it is ideal for the community which we serve.

If this is not true we should investigate the possibility of redesign. By analyzing the conditions of each prospect we have a definite basis on which to work out a series of steps which will cover the majority of cases, and intelligently to formulate a rate to obtain certain business at a much lower cost than was apparent before the potential market was analyzed.

Guide to Distribution Department

5. The fifth benefit derived from the survey analysis is that it be used as a guide to the distribution department in laying gas mains and extensions, and by the engineering department and finance committee in planning plant extension.

By knowing the total maximum hourly demand of each industry, in a certain territory, when a main or extension is being laid within that territory, ample pipe capacity may be allowed to care for those industries, whether the business is immediately available or not. The cost of increased size of pipe and interest on the increased cost will be more than repaid when the business is finally secured and ample capacity is available at the nearest point.

When the proposition of plant expansion is up, the analysis may be used by the finance committee, together with any developments from the sales department, in planning generating capacity to care for the industrial load. From the analysis and a report from the gas sales department as to the likelihood of a certain percentage of the total load being sold within a given period of time, a very definite plant expansion program may be mapped out

which will keep the plant investment down to its minimum practical figure.

Aid in Eliminating Electrical Competition

(6) The sixth major benefit to be derived is that the survey analysis may be used to eliminate electric furnace heating operations and presenting comparative cost figures on them with gas as fuel. Therefore, when the electric furnace salesman approaches a prospect within a territory, he must make his comparison against costs with gas on equipment recommended for the job under consideration. In other words, instead of comparing his costs on a dilapidated and inefficient fuel fired furnace, he will be met with a proposition submitted on equipment comparable with his own in modernness and efficiency and with a fuel much cheaper on a usable heat unit basis.

Conclusion

So after determining the reasons for and possible value of an industrial survey, to be most effective, it should, I feel, be made along the general plan outlined; and after completion should be used to derive the maximum benefit to all phases of the gas company organization.

As for the industrial fuel salesman, by seeing that it is used for maximum benefit to the whole, he will benefit proportionately as a part of that whole.

The composite picture presented by the preliminary and detailed analysis shows him his ultimate goal.

The well laid out sales plan allows him to budget his work so as to secure maximum results.

He has an opportunity of benefiting his company by annexing a desirable off peak load.

He can determine whether the present rate is desirable or whether he is bucking an impossible situation because the present rate is not applicable to his territory.

He is assured of ample distribution capacity in the desired territories.

He has sales resistance lessened considerably by the elimination of his most dangerous competitor, the electric heating salesman.

We have heard a lot about budget work and setting aside a definite goal to be reached, but a survey properly conducted in equivalent to budgeting the possible potentialities of industrial gas, and from this survey a definite budget may be set up which can be reached, since it is based on facts and not on guess work, as so many budgets at present are.

Selling Water Heaters

A number of suggestions aimed at increased sales

WATER heaters must be given their proper place in the gas company's scheme of selling, in line with their value in increasing send-out. This doesn't mean that the automatic water heater uses gas excessively; it means that in the majority of cases it will replace a coal heater or a tank heater, and where it replaces a coal heater the standard of living in that home is raised, more hot water is used and, consequently, more gas. Figures and charts substantiate this.

The Store and Window Displays

The water heater store display should be "staged" to a certain extent; easy chairs or settees for the prospects to sit on, literature attractively displayed, a book of testimonial letters at hand covering every selling resistance in that city, lists of satisfied users, etc., should be provided.

The field for "selling idea" window displays is vast. Moving displays, educational displays on manufacturing processes, a diplay that involves local interest, photographs of local installations, displays that show the proper use of appliances are all useful.

The User

Many towns have water heaters installed incorrectly, and by such action have set up selling resistance at the hands of unsatisfied users. Proper sizing, proper installation, proper servicing are big steps toward success. A small town in Illinois spent $3,000 to correct bad automatic water heater installations and their sales have been on the increase ever since.

The gas bill is by far the greatest selling resistance. Some customers have real grievances, which can usually be traced to an improper installation or improper type or size. Most grievances are imaginary. The user is comparing his present gas bill with the cost of a service that was really no service at all. It is as fair to compare the cost of walking with an automobile, or the cost of the telephone with the mail service.

Handling of Complaints Important

Gas bill complaints must be handled properly. The person to whom the complaint is made should understand enough about water heaters to satisfy the complainant for in absence of that knowledge he is apt to agree with him. Training gas company employees to explain these things is of basic im-

portance; they should know the comparative costs between hot water and other incidental expenses, newspapers, telephone, eggs for breakfast, theatre and movie tickets, cigarettes, etc.

To illustrate: Many times service men have been called in on a gas bill complaint where the charge was reasonable, only to find the complainant smoking a 25-cent cigar, more than he spends on hot water per person for more than a week. He'll pay a fifty-dollar garage bill without a whimper but will stand with his back to the wall on a six-dollar gas bill.

Telling the Story to the Public

Much arises out of the public's misunderstanding of a public utility and the gas company's former reluctance to telling the true facts. Many companies are taking their story to the public nowadays with startling results, but most of it is general and institutional publicity.

What is specially needed is specific information on specific things. Instead of permitting the consumer to think his gas bill is high, show him by comparison with other expenses that it is not. In other words, show him what he gets for his money.

Newspaper advertising and direct mail will do the trick, and at the same time will educate the gas company employees how to meet these resistances.

Satisfied users should be capitalized by testimonial letters, lists, etc.

Prospects

The salesman's efficiency is higher where he is given a definite task to do each day. Sending the salesman out to cover a territory aimlessly is an unproductive method.

It takes about three months to sell an automatic water heater. If the salesman is not working to interest prospects in January, he won't sell any in April. It's the old story of the snow ball.

Every method should be used to help bring these prospects up to the "interest" stage—newspaper advertising, direct mail, gas bill stickers, floor and window display, satisfied users, building reports, the rank and file of employees, etc.

And when a man becomes an interested prospect, a complete record should be kept of him. If it takes three calls to sell a man, and only one call is made, the cost of the first call is absolutely wasted. From the beginning of the sale until it is completed is generally a matter of months and if records are not kept, there can be no selling success.

Selling Terms

It is not necessary to sell at cut prices to get the business, but there should be a reasonable system of time payments and it should be consistently advertised. The prospect's dollar is a mortgaged dollar, and the "free" part of it is the goal of any number of live salesmen selling automobiles, victrolas, radios, etc.

Trade Co-operation

Where feasible, the aid of plumbers and appliance dealers should be enlisted so as to increase the number of sales outlets. But the plan of co-operation should include a chance for the co-operating dealer to make some money.

Publicity

It is a big mistake to spend money for publicity that is not backed up by the right sort of consistent personal sales effort. Such action only makes business for the advertising graveyard. The only chance that advertising has actually to sell goods by itself is when a special offer is made (price cut or long terms) on an article of standard use. Advertising in big space used under such conditions might sell tank heaters or gas ranges, but it will never sell automatic water heaters.

Advertising will awaken a passive interest, but unless a salesman comes along to fan the spark into

☼ ☼ ☼ ☼

"Do you think we'll really COOK with Gas?"

Fifty years ago, at the Philadelphia Centennial, the first gas range of modern style was proudly exhibited, and a baking powder company's booth became the mecca of much interest because their cakes were actually baked in a gas heated oven!

This summer another great Fair opens in Philadelphia—the Sesqui-centennial, or 150th anniversary of our country's independence. Again, gas ranges will be displayed, but who would recognize them as the descendants of that first funny little three-burner hotplate with its portable oven?

Now, as Fifty Years Ago—

If it's done with heat—you can do it better with GAS

In fifty years, the gas range has become not only the accepted cooking equipment in every modern kitchen, but in size it's grown to include four or five top burners, a large oven, automatic heat regulator, a broiler and a warming section. Instead of a crude, rusty-black finish, we have the brilliant beauty of shining white enamel with nickel trimmings.

Have you looked over a stock of gas ranges lately? You'll be amazed at the progress in design and invention!

(Your Name and Address Here)

A.G.A.-615

A Good Idea for a Gas Ad.

Gas at the "Sesqui-Centennial" and the "Centennial"

a flame, the money is wasted.

But conversely, selling without advertising is a slow process, and generally unprofitable to all parties concerned.

Where possible, a budget should be set up, and appropriations made for each division of advertising, institutional, ranges, room heaters, tank heaters, automatic water heaters. Part of it should be set aside as a special fund for special stunts that come up from time to time, movie tie-ups, etc.

Newspaper Advertising

The largest part of the appropriation should be spent in the newspapers. It reaches the largest number of people at the lowest rate; it reaches them every day. As a rule it reaches them in their homes. A special message can be sent broadcast on short notice. The advertising story can be changed from day to day.

Take advantage of the service supplied by manufaoturers, mats, plates, etc.

Direct-Mail Advertising

Where the newspaper hits the mass, direct mail advertising hits the selected prospect who is interested or should be interested in water heaters. Direct mail should work hand in hand with the salesmen's daily reports and bring-up prospect system.

Shop Organization

The shop should work in close harmony with the sales department.

If the men are not familiar with water heater specifications and installations, they should be educated. They should be made to realize the importance of quick delivery and a satisfactory installation and regulation. If the customer is not satisfied at the outset he never will be satisfied. And, if the type and size and installation are correct, he will be satisfied ninety-nine times out of a hundred.

A man, specially trained in water heater installations should inspect all jobs, O. K. the size and type sold and its installation and adjustment.

Situation Fundamentally Sound

Business is met by many problems of readjustment

L. W. Alwyn-Schmidt

THE outstanding feature of the market constellation this summer is its almost unexampled stability. It is the result of factors of great strength working outside the reach of the eye of the casual observer which indicate complete soundness of the basic structure of a nation's prosperity. This is not altered by the fact that business, no doubt, will show a slight downward movement during the coming month. This must be expected as the result of the slowing up of many of the seasonal trades which are always getting quieter during this time of the year.

The outlook, therefore, remains good with all indicators pointing to future improvement. Why is it then that merchants and manufacturers look at the market with a certain distrust?

It is said that banks are still most careful with their credit policies, that jobbers and retailers are ordering sparingly and in small quantities, and that the consumer is slow in taking up the most tempting offers. One of the most likely reasons is that our present prosperity is moving with an almost complete absence of spectacular display. The stock exchanges, after having gone through a period of severe house cleaning, have not staged any kind of a new boom. True, there have been various rapid rises in certain popular stocks and bonds, but the buying obviously did not come from the general public, being confined more or less to the professional operators. Retail business in the department stores is reported to be brisk upon the actual showing of the sales, but that active throng of buyers which characterises as a rule good retail business is missing. Manufacturers have found it more and more difficult to secure large volumes in any given line of merchandise. Selling, in fact, has become more and more complicated.

The Explanation

For all this there must be an explanation. To find the right one will also locate an indication, how to handle the problems of manufacturing and selling which are so essential parts of the present commercial situation. It requires only a superficial study of the financial situation of almost every medium sized business, be it shop, a wholesale establishment or a factory, to show that a great change has taken place in the general economic condition of the country. A year ago the accounts receivable and the accounts payable were showing almost everywhere a steady increase while funds in hand were decreasing. Today accounts payable and receivable are decreasing with the funds in hand rising rapidly.

Business is reducing its indebtedness. This very desirable condition has been produced by a more

(Continued on page 152)

Industrial Accident Prevention *

Importance of safety work in utility field

C. J. Rutland

Safety Engineer, Texas Power & Light Company

ONLY a few years ago the matter of preventing an accident was looked upon as theoretical rather than practical. Safety work was then considered philanthropical; of only humane value and a sort of side line to the operation of business. Today it is entirely different. Industry has grown so fast and the attempt to synchonize humans with machines without the accident prevention factor has resulted in thousands of deaths and injuries to employes and an astonishing increase in production cost. A death is no longer a part of a properly managed industry. It is wasteful. The saving of a life or the prevention of an injury becomes an industrial issue.

The safety movement is beginning to solve this problem and today it is woven closer into the fabric of operation of business than it has ever been before. Tomorrow it will be more so. Management must see that workmen adapt their routine of work to conform with the mechanics of machinery. The potential hazard of an electric power wire or of any machine or other apparatus will not change materially. The safety movement, therefore, has for its purpose the training of the employe in his work, educating him in better methods of routine practices, improving his working conditions, and the study of other measures that will prevent injuries to employes and damage to equipment.

Not to Be Considered a Side Line

Successful accident prevention work can not be treated as a side line to any business and, where any organization has well regulated instructions to workmen; where care is used in employment, where training of an employe is considered important, operating rules firmly enforced, and the general spirit of "good housekeeping" prevails, accidents will be few and far between.

Before proceeding to a consideration of methods of preventing industrial injuries, it is pertinent to determine who suffers as the result of their occurrence. Analysis will show that the sufferers are the worker and his family and the employer.

The physical and mental suffering resulting from industrial injuries must fall entirely upon the injured worker and his dependents. Possibly many of you have been in close enough contact with a death among one of your employes to the extent that you can visualize the distress and suffering that takes place in the home. No monetary consideration can fully pay a worker for the loss of his eyes, his legs or his hands; it can not compensate him for his mental suffering as he contemplates a life handicapped by the results of injuries or separated from work which has been an important part of his daily existence. Nor can it modify the grief occasioned by the premature death of any member of a family. Industrial injuries, however, are of serious importance to the worker and his family for other more compelling reasons. Few workers out of their own financial resources, are able to bear the loss resulting from stoppage of work on account of injury.

The Employer Suffers

The employer in our business also suffers as a result of the occurrence of injuries. We know that 62 per cent. of the serious and fatal accidents in our industry are caused from electrical shocks. Aside from the cost of whatever interruption to service there is because of these accidents, the loss of trained labor, and the disruption of organization, there is the all-important factor of the cost of the accident to be borne by the employer in the compensation settlement. This factor alone, if for no other reason, should prompt executives to designate some person or department to make a close study of accidents that are occurring in their organization and apply necessary remedies. Many executives believe that because they are paying premiums to the insurance companies, these companies will care for all losses and they are not particularly concerned as far as it affects them financially, whether such losses are large or small. This is a mistaken idea, for a company's accident experience determines the insurance rate. Accidents cost money, and you as employers must pay in proportion to your accidents.

Not Interested in Theories But the Practical Whys and Hows

You are not interested in theoretical safety. Sometimes I think we in this division have not been as diligent in our attempts to prevent distressing accidents to our employes because we have been misled by theoretical ideas. Safety work, to be successful, must be practical.

I had the privilege a few years ago to serve as chairman of a national committee, appointed by the Public Utilities Section of the National Safety Council. This committee was instructed to spend one year in research work in studying the fundamental

---

* Read at the 1926 annual meeting of the Southwestern Public Service Association.

causes of major accidents in the electric, telephone, and gas industries that had occurred during the previous year and to suggest remedies that would be helpful in preventing future accidents.

One hundred and nineteen companies, having 119,469 employes, sent in details of 25,314 major accidents which involved 176,941 actual days lost from work and 126 deaths to employes.

The reports carried voluminous details of all circumstances connected with the accidents. The revelations were startling and appalling and, after the final summary and report had been printed and presented before the National Safety Congress at its Buffalo Convention in 1923, the members of that committee emerged from that year's study of accident causes with a more profound respect for the safety movement. I was thoroughly impressed with the tragic side of an accident and more firmly convinced than ever that an accident does not just happen—that there is a cause—a fundamental cause, for every one—and that in many cases they should not come under the heading of an accident, but be charged to deaths and injuries caused from lack of proper instructions, failure to provide and enforce rules, failure to provide protective devices, and the use of improper tools and unsafe methods.

Human Element Governing Feature

In Public Utilities, the human element rather than the mechanical safeguard is the governing feature in accident prevention, and it is the one factor which has not been sufficiently emphasized. Any employe of a public utility can get hurt, possibly killed in the performance of his job; therefore, accident prevention, to be effective, must be made a vital part of the daily operation of his job. A safety meeting of employes should be held periodically and any duty performed by any employe can be profitably discussed at such a meeting.

In the larger cities, in many cases, accident experience has caused the establishing and enforcement of certain safety rules. Many companies do not even have typewritten copies of a few fundamental rules distributed among their employes. In any industry, management must first issue such vital safety instructions which, if strictly adhered to, will tend to eliminate the greater volume of accidents. In some companies even where safety rules are in effect, the failure to enforce them is the direct cause of many accidents.

Safety Instructions Must Be Repeated

Sometimes workmen are hired in the presumption that somewhere they have been thoroughly trained, and so are left to follow their own inclination. Sometimes they are given a set of rules to follow, but a check-up is never made to see that they are being followed to the letter. Perhaps the foreman may speak a word of safety as he details some jobs the new man must do, and that is about all. Safety instruction given the first day is wasted unless it is repeated a good many times.

Boiling down all these facts so that they may be applied to individual companies, there are two vital remedies. These remedies are practical, for they have already been thoroughly tried out and proven successful in a number of large companies.

The first of these is the suggested remedy and its application that results from an exhaustive investigation of an accident. This covers a "multitude of sins." It includes principally the determination of the fundamental cause; fixing the responsibility; promulgating new rules; and the executive backing which is ofttimes essential and which carries great weight.

The second is the medium through which the majority of these may be woven into the industry. This certainly is the foreman's responsibility, the scope of which might include the entire field of training the workmen, the solicitation of safety help from the workman, the anticipation of accidents on the job, the issuing of special instructions for the varying conditions encountered, and the enforcement of rules in effect.

The Foreman

Much has been said about the foreman. Long since has industry realized that dealing in accident prevention means dealing with men rather than with machinery or equipment. The closest point of contact with the workman is the foreman. He is placed in his position because he is supposed to be of higher mentality and possesses a broader knowledge of the business and operating methods than the men whose work he supervises. In a great many cases, however, management, while admitting that the foreman is the keynote in accident prevention, has neglected to emphasize this fact to him. It has not sufficiently impressed on his mind that safety is to be made just as important as any other part of the work—to be treated on exactly the same basis—and that he is going to be held strictly accountable for accidents that happen in his department unless the investigation shows otherwise.

The Investigation

One very surprising fact is that in the majority of cases after a serious accident has happened a thorough investigation is not held to determine the true cause and fix the responsibility.

Many companies, however, do make rigid investigations of all important and even near serious accidents where death or a severe injury could have resulted. The primary purpose is to bring out suggested plans for the future safety of employes. Again, it is a great factor in putting accident prevention on the same plane as other phases of the work. Successful accident prevention work must be based on actual accident experience and an investigation provides the means of gathering all the facts. In any organization there is no question as to the psychological effect on the minds of the

(Continued on page 154)

As The Journal Views It

THE HOUSE HEATING RATE

There is considerable activity at the present time along house-heating lines in various sections of the country. The gas companies are showing a very decided interest in this particular branch of the domestic field. One of the most significant characteristics of the present attention paid by the gas industry to house-heating business, is the formulation of special rates for those who are going to use gas this winter for heating their homes.

That house-heating business has come to stay seems to be an assured fact. The gas industry as a whole appears to be thoroughly sold on house-heating. Much study has been made of the various economic and technical problems connected with the development of such a load, and various plans have been made for taking care of the equipment servicing the house-heating consumer during the winter by the development of proper summer loads. It is unquestionably and undoubtedly true that house-heating business has progressed considerably in the past few years and may now be considered to have emerged from the experimental stage.

The fact that gas companies have seen fit to make special inducements to the house-heating customer through specially prepared rate structures pertaining solely to them is the most promising sign of all that our industry is taking this business seriously. It has been said time and again that in selling gas for house-heating, the question of cost of gas must not be taken as a determinative factor. It has been said that selling house-heating gas is the same as selling quality merchandise of any other sort. It is true that other fuels will heat houses more economically than gas but gas is the quality fuel for this purpose. It has advantages which make it easy to sell to the man who can afford and who is willing to pay more for getting better service and better merchandise.

This, of course, is true, but even with reduced rates, gas as a house-heating fuel would scarcely appeal to the man in poor or rather moderate circumstances. Nevertheless, if the gas industry is to make a real success in the house-heating business, it must be able to broaden its field beyond the wealthy class. It must be able to convince the great middle class of American citizens that house-heating by gas is just suited for them. And it stands to reason that in order to do so it must be able to charge for its gas thus consumed at a special rate, at a rate that is lower than what the consumer pays for gas used for ordinary purposes in the home.

Thus, the movement that is now taking place and that is manifested in the reduction of rates for house-heating purposes, is a very important indicator of the steps which gas companies are adopting in the development of this field. When the rates are moderate, then there remains no reason at all why the home should not be heated with gas instead of with coal or oil. It is needless to discuss here the advantages of gas as a fuel but it should be mentioned that in enumerating these points, there has always been the consideration that the cost of the gas is rather high. Now it appears that this disadvantage has been removed and will continue to be removed throughout the country.

It is not our intention to indicate that the reduction of rates is always possible. The economics of any particular locality varies very markedly from another. Each gas company must decide this matter for itself, but if it can reduce rates, it should do so, for no greater impetus can be given to the house-heating business than the moderation of the cost of the gaseous fuel.

¤ ¤ ¤ ¤

DISPLAYS OF INDUSTRIAL APPLIANCES

A visitor to a gas company seldom sees industrial appliances unless he asks specifically to be shown them. The windows of the gas store and the floor itself, have not been generally devoted to showing industrial equipment. The reason is, of course, evident, for it is unquestionably true that the great majority of people who come into the gas company office are primarily interested in domestic appliances and not in the furnaces and the like, used in the factory. But is this true of those who pass the displays shown in the windows outside? Is it not a fact that many business men and others who are connected with the manufacturing establishments of one sort or another, often pass these windows?

Would it not therefore be worth while occasionally to show industrial appliances in window displays?

Some gas companies have realized that this is necessary and that good results can be obtained from displays of industrial equipment. Such displays need not necessarily be devoted to large furnaces and the like, but to such apparatus as hotel ranges, industrial hot water heating systems, baking ovens and other similar equipment used not so much in large factories as in the smaller industrial establishments. Window displays have been known to attract attention when properly designed and it does appear that industrial displays of this character would be very advantageous.

In speaking of industrial appliance displays, mention must be made of the value to the gas industry and to the makers of such appliances of exhibits at conventions of industries in which heat is an important factor. In a broad sense, this would really mean all industries, but it is possible to pick out certain important examples. For instance, the heat treating industry falls into the latter category. Then again, exhibits of house heating equipment would undoubtedly create attention at meetings of heating and ventilating engineers. Furthermore, there does not seem to be any question but that good results would be obtained by displaying all sorts of gas appliances at plumbers conventions, at meetings attended by architects and builders, etc.

It might also be mentioned that exhibits of appliances in technical colleges and universities in connection with courses on the use of gas and its properties would also be of considerable advantage. In fine, it is all a question of publicity, and there is really no better form of publicity than an exhibit attended by competent, well-instructed attendants who are always ready to explain details, and if possible, actually show the appliance in its operation. Such exhibits will unquestionably aid in promoting the sales of appliances and in general in furthering development of the industrial gas business.

Gas Lighter in a Window Display

An attractive window is obtained

James V. Murray

HOW to display a household utility, such as a sparking gas lighter, unornamental but useful, so it will compete against the glittering specialties carried in other sections of the show windows of the store, and obtain "its place in the sun," was recently solved by Manager G. M. Maddox of the Woolworth 5, 10 and 15 cent store at 1620 Polk street, San Francisco.

Manager Madden put in a gas range, obtained from a stove company for the purpose, a white enamelled and brightly nickeled affair, the stove company being glad of the chance to get free advertising for itself by the loan.

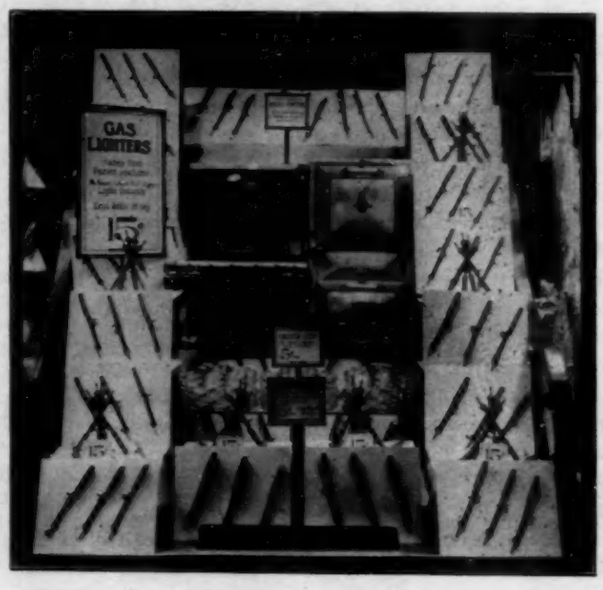
The gas stove filled up the center of the window section. And in front of the stove, to give a touch of brilliancy to the center, was featured an array of small glass caster cups.

There were gas lighters in clusters, and one depicted in action, with flashes of light springing forth.

A large sign, black on white, advertising the gas lighters at 15 cents each, with extra refills at 5 cents per package, told the story of what was offered.

The main display consisted of a number of the small gas lighters fastened to large white cards, set at diagonals thereon, with only three on each card, leaving plenty of white space now being appreciated so much by magazine and newspaper advertisers.

The gas lighter represents a "long-felt want" in this neighborhood, due to the fact that most women, not being smokers, are always running out of matches. And it must be embarrassing, in an apartment house, to have to wake up the bachelor hall-room boys, early in the morning, to obtain the much-needed lucifer to light the gas range with, so as to start the morning coffee percolating.



GAS MERCHANDISING

Domestic – Industrial

Ideas for the Man Who Sells

William H. Matlack

BETTER HOMES EXHIBITS

THE months of April and May saw the exhibition of many "Better Homes" from coast to coast and these "Better Homes" afforded the gas man an ideal opportunity to display his latest wares to prospective purchasers. The storage type water heater, the instantaneous automatic water heater, the circulating gas water heater with remote control, laundry equipment and oven heat control gas ranges of shining nickel and all white enamel. In cities where the "Better Homes" exposition was held in an auditorium of any size the gas company was sometimes permitted to conduct demonstrations, serving all comers with gas-cooked foods. This type of mass selling is well worth the effort and expense and while no immediate direct results may be apparent from such a demonstration and exhibit, untold benefits are bound to accrue, for you must display your wares to sell them. The Pacific Gas and Electric Company evidently find such exhibits productive. For even though they do not sell appliances they exploit these "Better Homes" expositions and their displays through the use of paid newspaper advertising.

✡ ✡ ✡ ✡

A NEW IDEA FOR OPERATING THE HEAT REGULATOR

A FEW days ago this writer was in the store of the Illinois Light & Power Corporation in East St. Louis, Illinois, and he noticed that one of the saleswomen was having quite a siege with a man and a woman who were, judging from appearance, interested in a Lorain regulator. The man would take hold of the wheel and turn it and then stand back from the stove and sight with his eye across the front frame, then across the top and finally he stepped out in front of the stove, stooped down, sighted, took off his hat scratched his head, smiled and signed on the dotted line. As the proceedings were strange we ventured to ask the saleslady "what it was all about?" and she informed us that the man, who was a carpenter, wanted his wife to have a modern gas range with an oven heat control, but that she was very near sighted and that it would be impossible for her to operate the controls. So he came down with her to see if he could not devise a method of attaching a dial to the Lorain upon which he could paint figures large enough for his wife to see, and still not affect the operation of the regulator. The eye measurements convinced him that he could do this and the range was purchased. He did not, however, divulge his idea for he probably "had his mind on a patent."

✡ ✡ ✡ ✡

OBJECTIVE MAP TO SHOOT AT

THERE is a commercial man down in Dixie who has a map under the glass on his desk that he calls his "Objective Map." On this map he has colored squares showing the location of every prospective heating and industrial job. His object he says is "to keep all this new business right before my eye. It is all-important and I do not want to miss any of it or want my men to lose sight of it, so I just put it here where I cannot fail to see it daily, and I think it helps mightily to keep me keyed up to what I have not secured in the way of send-out. I find that if there is an objective the results come faster, especially if you keep that objective in plain sight all the while."

SITUATION FUNDAMENTALLY SOUND

(Continued from page 146)

stringent credit policy and by offering special inducements to the prompt debtor. The result is the building up of a sound financial reserve which remains at the ready reach of American business, but for which, at the present moment, there is no real use. The situation is rather strange to the average American merchant accustomed to putting to work every possible available cent. The money is in the banks at the present time. It does not work and by its slow accumulation has produced what amounts practically to a further deflation of the dollar which in actual purchasing value is approaching more and more pre-war levels. In fact it has, if translated in terms of wage earnings, even outdistanced pre-war purchase capacity. To state the situation squarely we have reached a condition where the purchase ability exceeds the purchase desire, creating a volume of purchase strength larger than the existing selling offer. This has produced an increase in the quantity and monetary volume of the sales of merchandise but has reduced the actual profits on each sale.

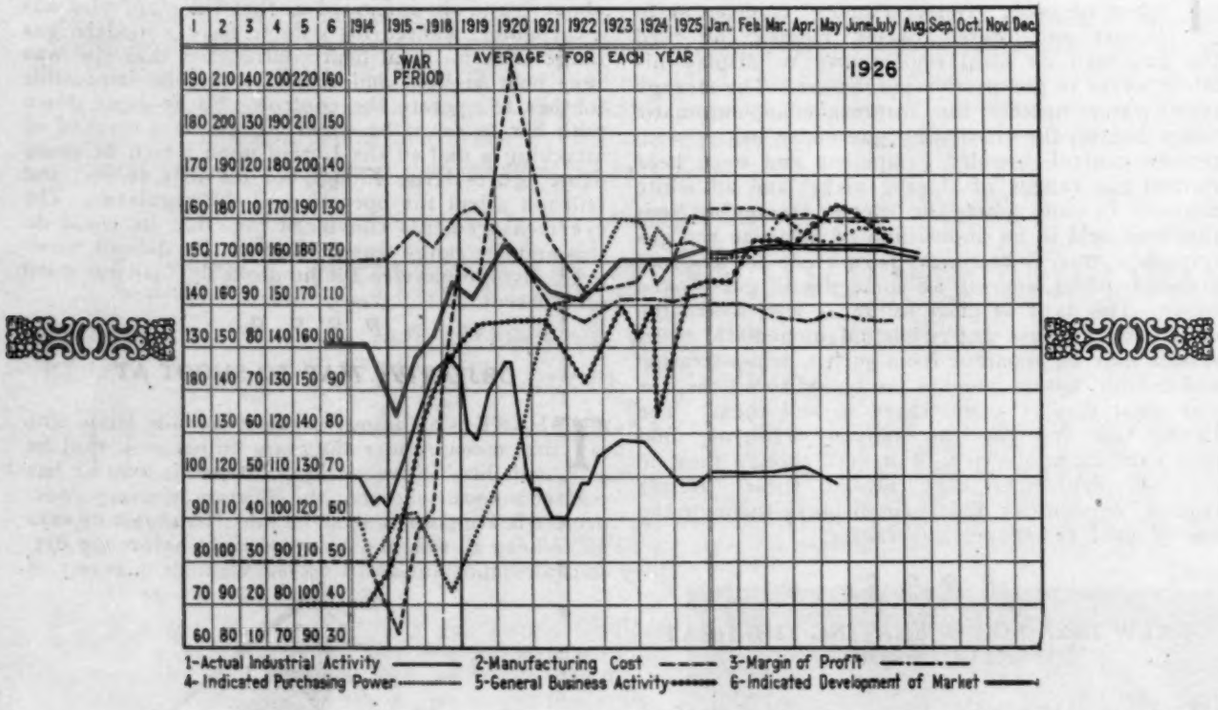
A Rare Situation

This is a situation rarely met in American business life and the American business man has not yet learned how to deal with it effectively and how to adjust his business practices to this novel condition. Hence business mistrusts its own devices and instead of accepting freely its good luck has preferred to move with increasing circumspection.

Of what nature are the dangers which American business seems to see on the economic horizon? Is there a boom ahead of us with the danger of a very heavy decline at its end, or will there be a continuation of this slow process of economic adjustment in the direction of a new balance of purchase desire and selling offer? It seems the answer lies entirely in the hand of the American business man himself.

Price Cutting

The early part of the year has been characterized by a general tendency to price cutting. Surplus stocks which had accumulated during the fall of last year and had been still further increased by the most unseasonable weather during Spring and early Summer, have been cleared to some extent. This has entailed considerable losses in manufacturing and selling profits. The process of clearing the channels of distribution has come to an end now and is replaced by a more reasonable policy of rebuilding the market upon the basis of higher values both in respect of quality and price. The dollar after having seen an expansion in its quantitative purchase ability is now gaining further strength in the direction of quality. The inherent value of the American industrial product is on an upward grade. Highgrade workmanship which has been lost under the stress of manufacturing cheaply during the period of deflation will now be fully established again in the American plan of manufacturing. Not only will the



(Continued on page 154)

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

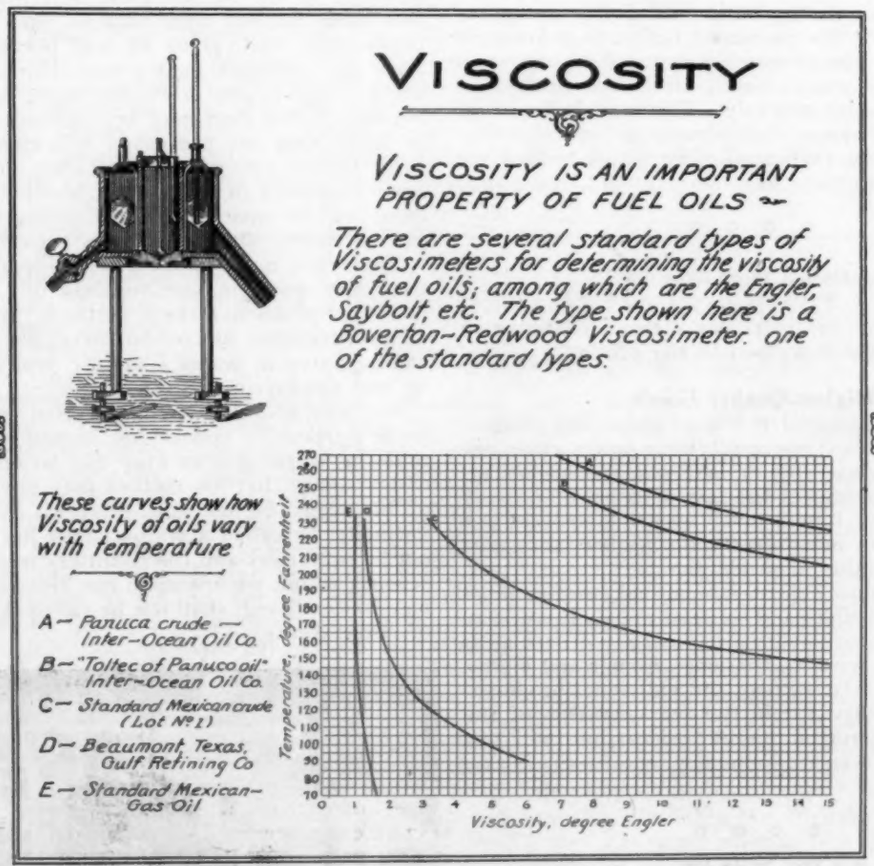
Lesson No. 132

Combustion

Viscosity

While it is always a difficult matter to say which of a number of properties of a substance is the most important, it may be held that there is not a more important property of a mineral oil than its viscosity. For this property really tells what use can be made of the oil, and with it are connected other characteristic qualities of the oil which vary in the same manner that it does. Hence, too much emphasis can not be placed on the viscosity test.

Viscosity is simply a measure of resistance to flow of the oil which is manifested in internal frictional forces. In other words, when the viscosity is high, the flow of the oil is slow due to the fact that particles of the substances are subjected to high internal friction. This will naturally follow from the appearance of viscous oils, which at times approach the state of a semi-solid. On the other hand, the less viscous materials, which at times approach consistency of water, are not subject to such high internal frictional forces,—which is also evident from their appearances,—as they are easily flowing liquids.


VISCOSITY
VISCOSITY IS AN IMPORTANT PROPERTY OF FUEL OILS
There are several standard types of Viscosimeters for determining the viscosity of fuel oils; among which are the Engler, Saybolt, etc. The type shown here is a Boverton-Redwood Viscosimeter. one of the standard types.
These curves show how Viscosity of oils vary with temperature
A— Panuca crude — Inter-Ocean Oil Co.
B— "Toltec of Panuco oil" Inter-Ocean Oil Co.
C— Standard Mexican crude (Lot No 1)
D— Beaumont, Texas, Gulf Refining Co
E— Standard Mexican-Gas Oil
Temperature, degree Fahrenheit
Viscosity, degree Engler

Viscosity Varies With Temperature

It is understandable that as the temperature rises, a viscous oil will become more fluid and this applies as well to the non-viscous oil. Thus it follows that viscosity varies in accordance with the temperature. In fact, one of the essential conditions in the determination of viscosity, is the maintenance of a constant temperature; otherwise it is impossible to obtain comparable results.

Viscosity is determined in an instrument known as the viscosimeter. The form and design of this instrument also has a very important bearing on the viscosity determination and hence, in order to be able to compare oils and to interpret correctly viscosity values, it has been necessary to standardize the dimensions and design of the viscosimeter. Accordingly the viscosity is reported in degrees Engler, degrees Saybold and the like, the proper name in each case referring to a standard type of viscosimeter.

From the standpoint of viscosity, fuel oils may be divided into two classes. In the first class are included the residual fuel oils, asphaltic base crudes, and other oils which have to be preheated before they are used in the burner. The preheating is for the purpose of changing the physical state of the oil or fuel so that it will atomize properly. The second class contains those oils whose viscosity is so low that they do not have to be preheated. The distillate fuel oils usually belong to this class.

¤ ¤ ¤ ¤

(Continued from page 152)

dollar buy better material but also added value in finish and general execution of the product.

Higher Quality Goods

Expressed in general terms of industrial production this will mean: more working hours expended upon the individual unit of material and higher industrial improvement of the raw material on its way to the consumer. It will mean higher labor cost per unit but need not mean essentially higher labor cost upon the total value of production.

If this policy now indicated by actual developments is carried out carefully and conscientiously it will lead to a further improvement of the market situation. It will bring more work to the wage earner and higher earnings to the salaried man and individual producer, because the quality put in the workmanship of the product will command higher prices, but will not put further pressure upon the reserves of raw materials.

¤ ¤ ¤ ¤

INDUSTRIAL ACCIDENT PREVENTION

(Continued from page 148)

employes by conducting a thorough investigation. It has the tendency to impress on them the close relation between the elimination of accidents and efficiency in their work, and that a careless act is treated in the same category as poor work. It brings recognition of the importance of making safety a vital part of the daily routine, and possibly the fear of the consequences of an investigation. Safety is thus woven closer into the fabric of the business.

The General Procedure

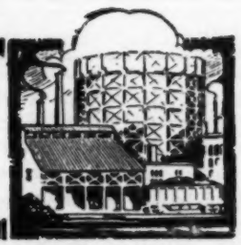
In these companies which have established well-worked-out investigation plans and who are obtaining the results hoped for, the general procedure is to question those who were present when the accident happened and to leave nothing unturned; to get to the very bottom of the matter and study all contributing causes; to examine any apparatus or equipment involved for any possible safe rearrangement or safeguarding; to seek for an improvement in forming safe working habits; to look for personal factors that may have led the workman to become careless or inattentive; to shield no one; to enter into the spirit of the investigation with justice and firmness to all, but with the determination to seek the basic causes and impose such penalties, or promulgate such plans as will prevent recurrence. Such an investigation is a real remedy. And, when the findings of the safety engineer, or the board or inquiry, as the case may be, of the more important or fatal cases are presented in a clean-cut analysis form to the general manager, his clear vision and keen judgment in matters of decision or admonishment will at once lend added strength to the prestige of safety throughout the organization.

There are many more vital discussions pertinent to safety work in our business but time will not allow us to discuss them further. If we put accident prevention in our business, we have taken a forward step in better economy, and improved public and employe relations.

We will also become associated with the more noble purpose of conserving human life, to the end that the working man may live to enjoy the fruits of his labor; that his mother may have the comfort of his arms in her age; that his wife shall not, untimely, be called a widow; that his children shall not be fatherless and the countless wrecks of human derelict whom we see upon our sidewalks, men who were once strong, shall not be called the by-products of carelessness.

A Window Display showing a complete Kitchen Outfit

NEWS OF THE GAS INDUSTRY



Gas Engineers at Meter Course

Atlanta, Ga.—More than 100 gas engineers, gas appliance manufacturers, executives and representative employees of gas utilities companies throughout the Southeast attended the third annual gas meter lecture course of the Southern Gas Association, which closed recently following a three-day session.

Headquarters were maintained at the Ansley Hotel, but most of the lectures were given at the shops and laboratories of the Georgia Railway and Power Company at 211 Decatur street.

Among the subjects discussed were "Diaphragms," by W. Griffin, Gribbel, of John J. Griffin & Co.; "Meter Shop Personnel and Equipment for a Company of 2,000 Meters," by Charles Leech, chairman of the board of directors of the Macon Gas Light Company; "Slow Motion and Gradual Cease Tests," by E. C. Kollock, of the Georgia Railway and Power Company; "Training of Meter Repair Men," by L. M. Stricklin, of the Georgia Railway and Power Company; "Unusual Short Life of Diaphragms—Causes and Remedy," by J. D. McIlhenny, Jr., of the Helme and McIlhenny Company of Philadelphia, Pa.; "Care of Handling and Setting Meters—Selling the Idea to the Fitter," by M. H. Pittman, of the Georgia Railway and Power Company; "Unaccounted for Gas," by C. J. Weinmeister, of the Georgia Railway and Power Company; "Should Meters Be Removed When a House is Vacated," by Joe Sayne and R. L. McCuen, of the Georgia Railway and Power Company; "Development of Large Capacity Meters," by A. McWolfe, of the Maryland Meter Company, Baltimore, Md.; "Pride of Workmanship," by Charles Leech, and "Meters for High Pressure Work," by J. C. Diehl, of the Metric Metal Company, Erie, Pa.

Visitors were guests of the Georgia Railway and Power Company on a 45-mile tour taking in practically all the points of historic interest in and around Atlanta, and a regular annual banquet of the course was held under the direction of M. H. Pittman, manager of the service department of the power company.

* * *

Tionesta Gas Company Absorbs Proper Gas Co.

Tionesta.—J. B. Forker, of Oil City, owner of the Tionesta Gas Company, one of the companies supplying gas to Tionesta, has transferred the lines and leases of the Proper Natural Gas Company in Tionesta and vicinity to the Tionesta Gas Company. The production of gas owned by the Proper Company will be turned into the lines of the Tionesta Company and the business will thereafter be operated under the name of the latter. The Proper Company was owned by the late Lewis Emery, of Bradford, who purchased all the interests a short time before his death. The sale of the property at this time is in line with a policy adopted by his heirs to close out all their outlying business and confines themselves to the Bradford field and McKean County in so far as the production of oil and gas is concerned.

This transfer will insure the Tionesta Company an ample supply of gas for the purpose, and make it possible for them to supply their patrons without running their pumps except in the coldest months of the year.

F. L. Blanchard New President P. U. Advertising Association

Frank Leroy Blanchard, new president of the Public Utilities Advertising Association, is often spoken of as "the dean" of American advertising, owing to his long services and experience in this field. Yankee-born, from the State of Maine, he started his business life in the footsteps of that other notable journalist from the same state, the late Frank Munsey.

After graduation from Bates College, Mr. Blanchard received his first assignment as a reporter on the "New York Tribune." He soon progressed to the city editor's desk on the New York "Morning Telegraph," and then for two years was assistant editor of the "Evening Telegram." The "Evening World" then received the benefit of his abilities, and for three years he remained on the editorial staff of this newspaper, nearly a world's endurance record, as reporter's jobs went in those days.

It was after his connection with the "World" that Mr. Blanchard launched the "Editor and Publisher" for J. B. Shale, then president of the Publishers' Press Association. Mr. Blanchard was its first editor, a position he held until the advertising field attracted his attention.

Mr. Blanchard's entrance into advertising was through the Hampton and Seaman agencies. He early became a student of advertising as well as a practical advertising man, and his thoughful articles in advertising periodicals attracted wide attention among business men. He soon accepted an offer to become managing editor of "Printers' Ink."

Probably Mr. Blanchard's greatest single contribution to the cause of advertising was his inauguration, in 1904, of the first oral course in advertising to be established anywhere in the world. This course was held, and continues to be held, at the Twenty-third Street Y. M. C. A. For twenty years Mr. Blanchard actively directed its destinies, and scores of men now prominent

in the advertising world owe their start to the instruction which they obtained in this class. Mr. Blanchard's retirement from this activity was the occasion for a testimonial dinner, at which more than two hundred leaders in business and advertising circles testified to their affection and respect for Mr. Blanchard as a friend and as a leader.

Much of Mr. Blanchard's experience and thought on the functions of his profession is contained in his book on the "Essentials of Advertising," first published in 1921. This book is regarded by many as a standard text book in training beginners and has been adopted as such by fifty educational institutions, including a dozen universities. Mr. Blanchard's standing in the advertising field brought him to the attention of Henry L. Doherty, who invited him to enter the Doherty organization in 1922 as director of public relations of the utility and oil properties of the Cities Service Company. At that time too, he became one of the charter members of the Public Utilities Advertising Association.

Since his connection with Mr. Doherty, Mr. Blanchard has been active in all branches of public utility advertising work. He is a member of the Advertising Commission of the International Advertising Association, chairman of the Publicity and Advertising Section of the American Gas Association, and is a member of similar committees in the American Electric Railway Association, the National Electric Light Association, and the Society for Electrical Development.

* * *

Elmira Co. Extends Mains

Albany, N. Y.—The Public Service Commission has heard proof on the application of the Elmira Water, Light and Railroad Company for permission to extend its gas mains into the town of Big Flats, Chemung county. There was no opposition presented at the hearing. The company proposes to construct its gas mains in this town so as to render service to the unincorporated village of Big Flats, the residents of which village are seeking such service. Decision of the commission was reserved.

New Househeating Rates in Meriden

Meriden, Conn.—The Connecticut Light and Power Company has announced a new gas rate for house heating, which is now in effect. There is at present but one building in the city heated by gas, but at least half a dozen others will be installed here before fall, and it is not unlikely that this will become a popular method of heating homes.

The new rate consists of a capacity charge of $5 per month per 100 cubic feet per hour of burner capacity, plus a consumption charge of 65 cents per 1,000 cubic feet of gas used. The present rate is $1.40 per 1,000 cubic feet.

In determining the capacity per hour of the burner the manufacturers' rating will be taken for the gas heating plants. For a domestic range the capacity is forty-eight cubic feet per hour; for a tank or storage type of automatic water heaters, fifteen cubic feet per hour, and the manufacturers' ratings will be taken on all other appliances.

The minimum charge under this new rate is the capacity charge, as determined above.

There is a coal clause in the new rate, providing for an increase or decrease of one cent in the consumption charge per 1,000 cubic feet for every 50 cent rise or fall in the price of coal above or below the present $6.25 rate, and also a charge of one cent for every increase or decrease of one-third of a cent per gallon from the present price of oil, which is now six and one-half cents per gallon.

The capacity charge for a furnace will be billed only for the period from October 15 to April 15. If the furnace is started in September, only the consumption charge will be made until October 15, and if the furnace is kept going after April 15, the capacity charge is not made, and only the consumption charge of 65 cents per 1,000 cubic feet is made for that period.

There is absolute thermostatic control of the heat of a house, and it is only necessary to light the furnace in the fall and turn it off in the spring. The heaters may be either hot water or steam, but require new installation. Gas burners may not be installed in furnaces already in use, but the piping and radiators now in use may be retained.

Officials of the gas company do not claim that the gas method of heating buildings will be cheaper than coal, but it is more convenient, as the janitor service is eliminated. No ashes are to be handled, and the gas is absolutely clean, and does not smoke up the house. No space is required for coal storage, and the coal bin space may be utilized for other purposes. No money is tied up in fuel supplies, and the gas is paid for after it is used, instead of before.

The new rate became effective July 31, and as several local householders have been inquiring about the equipment, it is expected several will be in use when cold weather comes. If this rate had been available a year ago, there is no doubt that many would have been installed because of the difficulty of getting coal.

* * *

Crystal City Co. to Extend Service

Albany, N. Y.—The Crystal City Gas Company has petitioned the Public Service Commission for authority to extend its natural gas system and serve Painted Post under a franchise granted by Painted Post officials July 8.

The Crystal City company states that it has arranged to secure an increased supply of mixed gas, natural and artificial, from the Allegany Gas Company, the latter having made contracts for increasing its facilities for producing mixed gas so that its output can be increased from one billion cubic feet a year to one billion six hundred million cubic feet. This added supply, it is stated, will be available for the public use this fall and will enable the Crystal Company to better serve its customers in Corning and also in Painted Post, to which it seeks authority to extend its lines.

Scholarship in Gas Engineering Offered by the Gas Company

Augusta, Ga.—Manager M. M. May, of the Gas Light Company of Augusta, which is included in the Southern Gas & Power Corporation, announces that a free exhibition in gas engineering at Johns Hopkins University is being offered young men in this section. This is the second instance where the organization has offered a scholarship, the award last year being won by Stephen G. Moran, of Gadsden, Ala.

Arrangements have been made for four scholarships, one to be made each year for the next four years, and the award is for a four-year scholarship, which insures the highest type of education at the splendid university.

Examinations for this year's scholarship will take place Friday, September 17, 1926. The conditions for the free scholarship are given by Walter Whetstone, president of the Southern Gas and Power Corporation, as follows:

The scholarship is open to any resident of any of the cities or towns in which the Southern Gas and Power Corporation operates.

He must meet the university requirements, but may qualify for admission either by graduation from an approved high school or by examination.

The scholarship is worth $350 a year and will cover tuition charges, laboratory fees and other incidental university expenses up to that amount.

The appointment will be one scholastic year, but the holder will be eligible for requirements from year to year if he conforms in character, industry and ability with the standards and requirements of the university.

A Real Water Heater Story Tea Kettle Taken in Exchange

Pittsburgh, Pa.—The Bridgeton, New Jersey, Gas Light Company is running a Ruud Water Heater Sale this summer and advertised that they would allow $10.00 for old water heater on a replacement job.

Bob Crowell, salesman, practically had an order closed when the prospect asked, "Do you allow $10.00 for any kind of a water heater"? And Crowell said "yes." The woman went in the house and returned with an old-fashioned teakettle saying "you may enter my order."

Some of the Relics—Miss Helen Jones holding the Tea Kettle

And they did.

The picture shows Mr. Crowell and Miss Helen Jones, daughter of Mr. Jacob Jones, manager of the Gas Company. Also a few of the relics taken in on Ruud purchases. Miss Jones is holding the teakettle.

Light Companies Merge

Worcester, Mass.—The stockholders of the Worcester Gas Light Company and the Worcester Electric Light Company have approved the merger of the two companies. The merger will be on the basis of two shares of Worcester Electric Light stock for every five shares of Worcester Gas Light stock. The Legislature last winter authorized the latter company to absorb the other.

The Worcester Electric Light Company is to issue 32,800 shares of new stock to take up 82,000 shares of common stock of the Worcester Gas Light Company. It also is to issue new stock to its stockholders to retire bonds, $1,400,000, and preferred stock of the Worcester Gas Light Company, $350,000, these issues to be on terms and price satisfactory to the directors and approved by the Department of Public Utilities.

Worcester Gas Light has outstanding $2,050,000 in common stock at $25 par, $350,000 in 8 per cent cumulative preferred stock of $100 par, and a funded debt of $1,200,000 first mortgage gold 5½ per cent. Series A and $200,000 mortgage gold 6s, Series B.

Mohawk-Hudson Plan Absorption of Troy Gas Co.

Schenectady, N. Y.—Steps are being taken for the enlargement of the Mohawk-Hudson Power Corporation's system of properties by the inclusion of the Troy Gas Company, according to Charles S. Ruffner, president of the Mohawk-Hudson. An exchange of stock of the two companies is the basis upon which the transaction will be negotiated.

The offer being made to stockholders of the Troy Gas Company is five-sixths of a share of the no par value preferred stock of the Mohawk-Hudson Corporation entitled to cumulative dividends at the rate of $7.00 annually and one share of the corporation's no par value common stock for each share of the capital stock of the Troy company. There are outstanding 75,000 shares of the Troy stock, and holders of a substantial majority have already indicated their intention of making the exchange. It is expected that all of the Troy stock will come in under the plan.

Application to the Public Service Commission for approval of the transaction will be made at once, and pending action by the commission arrangements have been made for deposit of the Troy company's stock with the Manufacturers' National Bank of Troy.

The entire electric supply of the Troy company is now furnished by the Adirondack Power and Light Corporation, and all the gas distributed in Troy is purchased from the Hudson Valley Coke and Products Company.

Companies in the Mohawk-Hudson group are the Adirondack Power and Light Corporation, The Municipal Gas Company of Albany, the Cohoes Power and Light Corporation, the Utica Gas and Electric Company, the Fulton County Gas and Electric Company and the Eastern New York Utilities, Inc.

An application for the acquisition of the Syracuse Lighting Company, the Seneca River Power Company and the Mexico Electric Company is now before the commission and one hearing on it has been made.

Frederic H. Hill Named Trust Company Director

Elmira, N. Y.—The board of directors of the Chemung Canal Trust Company have elected Frederic H. Hill, vice-president and general manager of the Elmira Water, Light & Railroad Company, to membership.

Mr. Hill fills the vacancy on the board caused by the death of Fred D. Herrick.

F. H. Hill, Elmira, N. Y.

For several years Frederick H. Hill has taken active interest in the affairs of the community. He is a leader in civic activities and organizations, as well as in several of the leading Elmira industries.

He is president of the board of trustees of the Y. W. C. A. and a director of the Y. M. C. A.

Coming to Elmira May 12, 1913, as chief engineer of the E. W. L. & R. R. Company, he has rapidly risen in the industrial field. Since July 1, 1913, he has been general manager of the company and vice-president since March 20, 1918. He is also a director in several other public utility companies.

Since Mr. Hill's managership of the company a steady increase has been noted in the business, service has been improved and additions been made to the company's property. Gas customers have increased from 6,700 to 10,700; electric customers from 3,900 to 17,300; street car passengers from six million to eight million, and annual gross revenue from $800,000 to $2,600,000. A new gas plant has been built during his administration and service extended considerably into surrounding towns and villages.

Mr. Frederic H. Hill is a graduate of Washington and Jefferson College where he obtained an A. B. degree in 1900. He then attended the University of Pittsburgh, receiving a C. E. degree in 1902.

Until 1906 he was an apprentice with the Pennsylvania R. R. Company. The next two years he was general manager of the Standard Engineering Corporation. Then for two years Mr. Hill did foreign sales work. From 1910 to 1912 he was in private practice on fuel and combustion engineering. The next year he supervised properties for the United Gas & Electric Corporation.

Then he came to Elmira.

Fulton County Gas Co. Seeks Fort Plain Stock

Albany, N. Y.—The Fulton County Gas & Electric Co., under a petition filed with the Public Service Commission, asks that it be authorized to purchase all the outstanding common stock of the Fort Plain, N. Y. Gas & Electric Light, Heat & Power Co. which supplies Fort Plain and Nelliston with gas and electricity.

The Fort Plain Co. has 5,100 shares of its no par value common stock outstanding out of an authorized capital issue of 7,500 shares. It buys its electricity from the Fulton County company.

The Fulton County company has made an agreement to buy the outstanding shares of common stock at $32 a share, plus a lump sum which shall be equal to the inventory value of materials and supplies on the books of the company as of Sept. 1, 1926.

Edgewater Gas Co. Is Incorporated

Toledo, Ohio.—The Edgewater Gas & Electric Light Co., a new Ohio utility corporation formed Friday for the purpose of furnishing general utility service in a number of Toledo suburbs, has been incorporated. The company will have a capitalization of $500 of common stock of no par value. The capital is nominal at this time.

Incorporators are members of the law firm of Marshall, Melhorn, Marlar & Martin. The first operation will be installation of gas in the Point Place district. Prominent Toledoans are included in the company.

* * *

Philadelphia Co. Builds New Plant to Develop Field

Clarksburg, W. Va.—To pump gas into their main lines from the Grass run field, a newly developed area in Gilmer County about twelve miles south of Glenville, the Philadelphia Gas Company is constructing a compressing station there. The first of two compressors has been placed on its concrete foundation.

The compressing station will be located on the Delbert Stalnaker farm, and will cost about $30,000. It will be a local gathering station to pump gas produced by four wells already drilled in the new field, and other wells which are planned to be drilled there in the near future.

* * *

New Manager Heads Payne Gas Company

Payne.—Butler C. Buchanan, Newport, Ky., has arrived here and taken over the local management of the Payne Natural Gas Co. His brother, George W. Buchanan, will be the local manager at Antwerp. The two brothers working in cooperation expect to put the plants in good condition.

* * *

H. L. Doherty & Co. Moves Cleveland Office

The removal has been announced of the Cleveland offices of Henry L. Doherty & Company, fiscal agents, City Service Company and Subsidiary Corporations, from 737 Guardian Building, and the main executive offices of the Ohio Public Service Company, from 1800 Keith Palace Building, to joint offices at 1400 Hanna Building, Euclid avenue and Fourteenth street.